

## CLAIMS

1. A modified bacteriophage for use in the treatment or prophylaxis of a bacterial infection, which bacteriophage presents at its surface a recombinant protein comprising
  - (i) a first component derived from a bacteriophage surface protein; and
  - (ii) a second component comprising variable region sequences of an antibody to provide a bacterial antigen binding site, said second component rendering said bacteriophage capable of binding to and thereby inhibiting growth of bacterial cells involved in the etiology of said infection.
2. A bacteriophage as claimed in claim 1 for use in the treatment or prophylaxis of a mucosal bacterial infection.
3. A bacteriophage as claimed in claim 2 for use in the treatment or prophylaxis of *Helicobacter pylori* infection.
4. A bacteriophage as claimed in any one of claims 1 to 3 which is a modified filamentous bacteriophage.
5. A bacteriophage as claimed in any one of claims 1 to 4 which is a modified M13 bacteriophage.
6. A bacteriophage as claimed in any one of claims 1 to 5 wherein said first component of said recombinant protein is derived from the protein responsible for adsorption of the unmodified form of said bacteriophage to bacterial pili.
7. A bacteriophage as claimed in any one of claims 1 to 6 wherein said second component of said recombinant protein comprises a ScFv polypeptide.

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8. A bacteriophage as claimed in any one of claims 1 to 7 which is a modified M13 bacteriophage wherein said first component of said recombinant protein is derived from the g3p protein.
9. A bacteriophage as claimed in claim 8 wherein said recombinant protein is a g3p – ScFv fusion protein.
10. A bacteriophage as claimed in any one of claims 1 to 9 for use in the treatment or prophylaxis of *Helicobacter pylori* infection wherein the antibody variable region sequences of said recombinant polypeptide are variable region sequences of a monoclonal antibody selected from the monoclonal antibodies of hybridoma cell lines 5F8 (ECACC No.95121524), 2H6 (ECACC No.95121526) and 5D8 (ECACC No.95121527).
11. The modified M13 bacteriophage of claim 10 designated B8 deposited at the NCIMB under accession number NCIMB 40779, or a derivative thereof which retains the ability to bind and infect *Helicobacter pylori*.
12. A pharmaceutical composition comprising a bacteriophage as claimed in any one of the preceding claims in admixture with a pharmaceutically acceptable carrier or excipient.
13. A method for treatment of a bacterial infection in a mammal which comprises administering a bacteriophage or pharmaceutical composition according to any one of the preceding claims.
14. Use of a bacteriophage as claimed in any one of claims 1 to 11 in the manufacture of a medicament for the treatment or prophylaxis of a mucosal bacterial infection.

15. A hybridoma selected from 5F8 (ECACC No.95121524), 2H6 (ECACC No.95121526) and 5D8 (ECACC No.95121527).

5 16. A monoclonal antibody selected from the monoclonal antibodies produced by the hybridomas according to claim 15.